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2188
JMW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: § Group Art Unit: 2188

Thomas W. Lanzatella, Graham Bromley, § Examiner: Ross, John M

John A. Colgrove, Ron Karr, §

Blaine T. Cuykendall, Oleg Kislev, §

Craig Harmer §

Serial No.: 10/087,901 §

Filed: February 28, 2002 §

For: System and Method for
Controlling the Creation of
Stable Disk Images §

Attorney Docket.: 5760-17800

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Box Non-Fee Amendment, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below:

B. Noël Kivlin
Registered Representative

4-28-05

Date

Signature

APPEAL BRIEF

Mail Stop Appeal Brief - Patents

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir/Madam:

Further to the Notice of Appeal filed February 28, 2005, Appellants present this Appeal Brief. Appellants respectfully request that this appeal be considered by the Board of Patent Appeals and Interferences.

I. REAL PARTY IN INTEREST

The present application is owned by VERITAS Operating Corporation, a corporation organized and existing under and by virtue of the laws of the State of Delaware, and having an office and place of business at 350 Ellis Street, Mountain View, CA 94043. (Appellants note that the current assignment record for the application (at Reel 013013, Frame 0714) identifies the assignee as VERITAS Software Corporation, and that a new assignment is being filed concurrently herewith.)

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences known to Appellants, Appellants' legal representatives, or assignee which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1, 3 – 18 and 20 are pending. Claims 1, 3 – 18 and 20 are rejected, and the rejection of these claims is being appealed. A copy of claims 1, 3 – 18 and 20 is included in the Claims Appendix attached hereto.

IV. STATUS OF AMENDMENTS

No amendments to the claims have been submitted subsequent to the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 is directed to a method comprising transmitting data to an application programming interface (FIG. 4 and FIG. 14, reference numeral 202; page 13, lines 12 – 15; FIG. 8, reference numeral 352; page 16, lines 4 – 8; page 27, lines 1 – 11; page 28, lines 1 – 20) identifying a storage object (FIG. 4 and FIG. 14, reference numerals 210; page 13, lines 9 – 11; page 19, lines 10 – 12; page 28, lines 1 – 23), and receiving, from the application programming interface, a freeze list (FIG. 12, reference numerals 512, 514; page 17, lines 12 – 19; page 23, lines 7 – 9; page 25, lines 1 – 4) with one or more freeze methods appropriate for freezing the storage object, wherein each freeze method includes a measure of quiesce strength (page 21, lines 24 – 30; FIG. 11, reference numeral 470; page 18, lines 14 – 23; page 22, lines 1 – 28).

Independent claim 4 is directed to a method comprising transmitting data to an application programming interface (FIG. 4 and FIG. 14, reference numeral 202; page 13, lines 12 – 15; FIG. 8, reference numeral 352; page 16, lines 4 – 8; page 27, lines 1 – 11; page 28, lines 1 – 20) identifying a storage object (FIG. 4 and FIG. 14, reference numerals 210; page 13, lines 9 – 11; page 19, lines 10 – 12; page 28, lines 1 – 23); receiving a freeze list with one or more freeze methods appropriate for quiescing the storage object from the application program interface (FIG. 12, reference numerals 512, 514; page 17, lines 12 – 19; page 23, lines 7 – 9; page 25, lines 1 – 4), wherein each freeze method includes a measure of quiesce strength (page 21, lines 24 – 30; FIG. 11, reference numeral 470; page 18, lines 14 – 23; page 22, lines 1 – 28); selecting one of the freeze methods (page 17, lines 18 – 19; page 25, lines 5 – 10), and issuing a command (page 25, line 10 – page 26, line 2) to the application programming interface to execute the freeze method.

Independent claim 7 is directed to an application program interface (FIG. 4 and FIG. 14, reference numeral 202; page 13, lines 12 – 15; FIG. 8, reference numeral 352; page 16, lines 4 – 8; page 27, lines 1 – 11; page 28, lines 1 – 20) that operates with an application to generate frozen

images of a storage object. The interface comprises means for receiving data identifying a storage object (FIG. 1, reference numerals 18 and 20; page 8, lines 15 – 30; page 28, line 1 through page 29, line 8; page 27, lines 5 – 11; page 30, lines 8 – 24; FIG. 4 and FIG. 14, reference numerals 210; page 13, lines 9 – 11; page 19, lines 10 – 12), means for returning a freeze list with one or more freeze methods appropriate for freezing the storage object (FIG. 1, reference numerals 18 and 20; page 8, lines 15 – 30; page 28, line 1 through page 29, line 8; page 30, lines 8 – 24; FIG. 12, reference numerals 512, 514; page 17, lines 12 – 19; page 23, lines 7 – 9; page 25, lines 1 – 4), means for receiving a selected freeze method associated with the storage object (FIG. 1, reference numerals 18 and 20; page 8, lines 15 – 30; page 28, line 1 through page 29, line 8; page 17, lines 18 – 19; page 30, lines 8 – 24), wherein each freeze method includes a measure of quiesce strength (page 21, lines 24 – 30; FIG. 11, reference numeral 470; page 18, lines 14 – 23; page 22, lines 1 – 28), and means for returning a frozen image as a function of the selected freeze method (FIG. 1, reference numerals 18 and 20; page 8, lines 15 – 30; page 28, line 1 through page 29, line 8; page 17, lines 20 – 25; page 30, lines 8 – 24).

Independent claim 9 is directed to an application program interface (FIG. 4 and FIG. 14, reference numeral 202; page 13, lines 12 – 15; FIG. 8, reference numeral 352; page 16, lines 4 – 8; page 27, lines 1 – 11; page 28, lines 1 - 20) that operates with an application to generate frozen images of a storage object. The interface comprises means for receiving data identifying a storage object (FIG. 1, reference numerals 18 and 20; page 8, lines 15 – 30; page 28, line 1 through page 29, line 8; page 27, lines 5 – 11; FIG. 4 and FIG. 14, reference numerals 210; page 13, lines 9 – 11; page 19, lines 10 – 12; page 30, lines 8 – 24) and means for returning a frozen image of the storage object (FIG. 1, reference numerals 18 and 20; page 8, lines 15 – 30; page 28, line 1 through page 29, line 8; FIG. 12, reference numerals 512, 514; page 17, lines 12 – 19; page 23, lines 7 – 9; page 25, lines 1 – 4; page 30, lines 8 – 24). The means for returning the frozen image includes means for transmitting a freeze list having one or more freeze methods appropriate for freezing the storage object (FIG. 1, reference numerals 18 and 20; page 8, lines 15 – 30; FIG. 1, reference numeral 14; FIG. 3, reference numerals 14.1 and 14.2; FIG. 12, reference numerals 512, 514; page 17, lines 12 – 19; page 23, lines 8 – 10; page 25, lines 1 – 4; page 30, lines 8 – 24), wherein each freeze method includes a measure of quiesce strength (page 21, lines 24 – 30; FIG.

11, reference numeral 470; page 18, lines 14 – 23; page 22, lines 1 – 28). In addition, the means for returning the frozen image also includes means for transmitting a frozen image (FIG. 1, reference numerals 18 and 20; page 8, lines 15 – 30; FIG. 1, reference numeral 14; FIG. 3, reference numerals 14.1 and 14.2; page 30, lines 8 – 24) representative of the storage object.

Independent claim 11 is directed to an application program interface (FIG. 4 and FIG. 14, reference numeral 202; page 13, lines 12 – 15; FIG. 8, reference numeral 352; page 16, lines 4 – 8; page 27, lines 1 – 11; page 28, lines 1 - 20) for controlling formation of a frozen image of a storage object. The interface comprises a storage object identifier identifying the storage object (page 28, line 1 through page 29, line 8; page 27, lines 5 – 11; FIG. 4 and FIG. 14, reference numerals 210; page 13, lines 9 – 11; page 19, lines 10 – 12), a freeze list data structure storing data representing one or more freeze methods appropriate for freezing the storage object (FIG. 5, reference numeral 234; page 14, lines 17 – 24; FIG. 9, reference numerals 400; page 20, line 3 – 13; FIG. 10, reference count 454; page 19, lines 25 – 26; page 20, lines 5 – 6; FIG. 9; page 23, lines 8 – 10; FIG. 12), a freeze method identifier identifying a selected freeze method from the one or more freeze methods (page 17, lines 18 – 19), wherein each freeze method includes a measure of quiesce strength (page 21, lines 24 – 30; FIG. 11, reference numeral 470; page 18, lines 14 – 23; page 22, lines 1 – 28), and a data structure for returning a frozen image corresponding to the selected freeze method (FIG. 6, reference numeral 254; FIG. 13, reference numerals 616, 614; page 26, lines 1 – 3).

Independent claim 13 is directed to an application program interface (FIG. 4 and FIG. 14, reference numeral 202; page 13, lines 12 – 15; FIG. 8, reference numeral 352; page 16, lines 4 – 8; page 27, lines 1 – 11; page 28, lines 1 - 20) for controlling quiescing of a storage object. The interface comprises a storage object identifier identifying the storage object (page 28, line 1 through page 29, line 8; page 27, lines 5 – 11; FIG. 4 and FIG. 14, reference numerals 210; page 13, lines 9 – 11; page 19, lines 10 – 12), a quiesce data structure storing data representing one or more quiesce methods appropriate for quiescing the storage object (FIG. 9, reference numerals 400; page 20, line 3 – 13), wherein each quiesce method includes a measure of quiesce strength

(page 21, page 24 – 30; FIG. 11, reference numeral 470; page 18, lines 14 – 23; page 22, lines 1 – 28), and a quiesce method identifier identifying a selected quiesce method from the one or more quiesce methods (page 25, lines 5 – 12).

Independent claim 16 is directed to an application program interface (FIG. 4 and FIG. 14, reference numeral 202; page 13, lines 12 – 15; FIG. 8, reference numeral 352; page 16, lines 4 – 8; page 27, lines 1 – 11; page 28, lines 1 - 20) for controlling quiescing of a storage object. The interface comprises means for receiving data identifying a storage object (FIG. 1, reference numerals 18 and 20; page 8, lines 15 – 30; page 28, line 1 through page 29, line 8; page 27, lines 5 – 11; FIG. 4 and FIG. 14, reference numerals 210; page 13, lines 9 – 11; page 19, lines 10 – 12; page 30, lines 8 – 24), means for transmitting a quiesce list having one or more quiesce methods appropriate for quiescing the storage object (FIG. 1, reference numerals 18 and 20; page 8, lines 15 – 30; FIG. 9, reference numerals 400; page 20, line 3 – 13; FIG. 1, reference numeral 14; FIG. 3, reference numerals 14.1 and 14.2; page 30, lines 8 – 24), wherein each quiesce method includes a measure of quiesce strength (page 21, lines 24 – 30; FIG. 11, reference numeral 470; page 18, lines 14 – 23; page 22, lines 1 – 28), and means for returning an indication that the storage object is quiesced (FIG. 1, reference numerals 18 and 20; page 8, lines 15 – 30; page 28, line 1 – through page 29, line 8; page 30, lines 8 – 24).

Independent claim 18 is directed to a method comprising transmitting data to an application programming interface (FIG. 4 and FIG. 14, reference numeral 202; page 13, lines 12 – 15; FIG. 8, reference numeral 352; page 16, lines 4 – 8; page 27, lines 1 – 11; page 28, lines 1 - 20) identifying a storage object (page 28, line 1 through page 29, line 8; page 27, lines 5 – 11; FIG. 4 and FIG. 14, reference numerals 210; page 13, lines 9 – 11; page 19, lines 10 – 12), and receiving a quiesce list with one or more quiesce methods (FIG. 9, reference numerals 400; page 20, line 3 – 13) appropriate for quiescing the storage object from the application programming interface, wherein each quiesce method includes a measure of quiesce strength (page 21, lines 24 – 30; FIG. 11, reference numeral 470; page 18, lines 14 – 23; page 22, lines 1 - 28).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1, 3 – 13, 15, 18, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cabrera et al. (USPN 6,708,227, hereinafter “Cabrera”) in view of Cochran (USPN 6,718,447, hereinafter “Cochran(1)”), Cochran (USPN 6,721,902, hereinafter “Cochran(2)”), and the Principia Cybernetic Web internet web site as of February 2000 (hereinafter “PCW”).
2. Claims 14, 16, and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cabrera in view of Cochran(1), Cochran(2), and PCW, and in further view of Gregg (USPN 5,938,786).

VII. ARGUMENT

First Ground of Rejection:

Claims 1, 3 – 13, 15, 18, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cabrera et al. (USPN 6,708,227, hereinafter “Cabrera”) in view of Cochran (USPN 6,718,447, hereinafter “Cochran(1)”), Cochran (USPN 6,721,902, hereinafter “Cochran(2)”), and the Principia Cybernetic Web internet web site as of February 2000 (hereinafter “PCW”). Appellants traverse this rejection for the following reasons.

Claims 1, 3, 4 and 6:

Appellants respectfully submit that Cabrera, Cochran(1), Cochran(2), and PCW, do not teach or suggest, either separately or in combination, a method comprising “**receiving, from the application programming interface, a freeze list with one or more freeze methods appropriate for freezing the storage object, wherein each freeze method includes a measure of quiesce strength,**” as recited in Appellants’ Claim 1.

There is no mention of a “list of freeze methods” being returned by any function or method in any of the cited art. The Final Office Action acknowledges that Cabrera does not teach that the API returns a list of methods appropriate for making the snapshot, where each method includes a measure of quiesce strength (page 3 of the final Office Action).

Cochran(1) also does not mention a list of freeze methods. Lines 11-32 of Column 4 of Cochran, cited by the Final Office Action, teach that transactional inconsistency may occur between a LUN backup snapshot and a primary, but this has nothing to do with providing a list of one or more freeze methods with associated measures of quiesce strengths.

Cochran (2) likewise does not mention a list of freeze methods. The Final Office Action asserts that Column 4, line 57 through column 5, line 7 of Cochran (2) teach that transactional consistency is likely to result “due to the inability to reliably quiesce the primary and backup storage objects” (Page 4 of the Office Action). However, the cited lines of Cochran (2) teach that “once mirroring is disabled, or split, subsequent write operations may change the state of the mirror copy” and that “these **subsequent** write operations may be accidentally generated by the application system”, leading to a possible corrupted representation of the primary data object “following a restore operation”, not “due to the inability to reliably quiesce the primary” as suggested by the Final Office Action. Cochran teaches “storing a backup object on a locked LUN”, and “determining whether the LUN is still locked prior to employing the backup object in a restore operation” (Column 5, lines 25 – 30), but this has nothing to do with providing lists of freeze methods.

The Final Office Action further asserts that “a skilled practitioner in the art would recognize that the introduction of a semaphore as in Cochran (2) also introduces the potential for deadlocks”. Even if “a potential for deadlocks” were recognized by a skilled practitioner based on Cochran, such a potential for deadlocks would not suggest supplying a list of freeze methods, or including quiesce strengths with freeze methods.

The Final Office Action additionally asserts that “one skilled in the art would expect the potential for transactional inconsistency and deadlocks to be present in the system of Cabrera, and that such potential would depend upon the particular combination of service providers used in making the snapshot, thereby making the use of certain combinations more likely to result in undesired behavior.” Appellants respectfully disagree, and can find absolutely no basis in the cited art for this assertion. In order to establish a *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or incentive to do so. *In re Bond*, 910 F. 2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). The art cited by the Final Office Action does not, singly or in combination, teach or suggest all limitations of the currently pending Claim 1, such as providing a list of freeze methods including quiesce strengths.

The Final Office Action further asserts that it would have been obvious “to apply the decision theory of PCW, in the system made obvious by the combination of Cabrera and Cochran(1,2), such that the risk of transactional inconsistency and deadlocks associated with particular combinations of service providers used in making a snapshot is reflected in a quiesce strength (i.e. risk ranking), in order to make an informed decision about which alternative to choose as taught by PCW.” Appellants respectfully submit that, as held by the U.S. Court of Appeals for the Federal Circuit in *Ecolochem Inc. v. Southern California Edison Co.*, an obviousness claim that lacks evidence of a suggestion or motivation for one of skill in the art to combine prior art references to produce the claimed invention is defective as hindsight analysis. PCW provides a broad description of decision theory, including a value function that introduces an ordering on the set of consequences and thus ranks alternatives. However, Appellants can find no teaching or suggestion in PCW or the other references cited by the Final Office Action as to why or how a person of skill in the art would combine the broad field of decision theory as taught in PCW in any particular way with the teachings of Cabrera, Cochran(1) or Cochran(2) related to snapshots to obtain the limitations recited in Claim 1. Even if the teachings of PCW were

combined with Cabrera, Cochran(1) and/or Cochran(2), Appellants respectfully submit that the limitation of providing a list of freeze methods with associated quiesce strengths would not be obvious, as neither Cabrera, Cochran(1) nor Cochran(2) teaches or suggests a provision of alternate freeze methods including quiesce strengths.

Still further, the Final Office Action asserts that “it would have been obvious to provide such information as a return value from the API of Cabrera, as such teachings are well known in the art for the purpose of interaction between applications and underlying processes managed by an API, noting that the possible alternatives would comprise a list of snapshot methods.” Once again, Appellants can find no teaching or suggestion in any of the cited art to support this assertion of the Final Office Action. None of the cited art teaches or suggests an API to obtain a list of freeze methods. Appellants assert that the fact that an API is mentioned in Cabrera does not make the limitation of a specific API **that returns a list of freeze methods** obvious.

Accordingly, claim 1 along with its dependent claim 3 is believed to patentably distinguish over the cited references for at least the reasons given above.

Claim 4 recites features similar to those of Claim 1, as well as additional limitations of selecting a freeze method and issuing a command to the application programming interface to execute the freeze method, and is therefore believed to patentably distinguish over Cabrera, Cochran(1), Cochran(2), and PCW, for at least the reasons given above. Claim 6 depends on Claim 4, and is therefore also believed to patentably distinguish over the art cited by the Final Office Action for similar reasons.

Claim 5:

Claims 5 depends on Claim 4, and is therefore also believed to patentably distinguish over the art cited by the Final Office Action for the reasons given above. In addition, Claim 5 recites a limitation of selecting the freeze method as a function of quiesce strength. None of the art cited by the Final Office Action, singly or in combination, teaches or suggests selecting a freeze method

based on quiesce strength. Appellants therefore respectfully submit that Claim 5 patentably distinguishes over the cited art.

Claims 7 – 10:

Independent Claim 7 recites an application programming interface comprising, in pertinent part, means for returning a freeze list with one or more freeze methods appropriate for freezing the storage object, wherein each freeze method includes a measure of quiesce strength.

Independent Claim 9 recites an application programming interface comprising, in pertinent part, means for transmitting a freeze list having one or more freeze methods appropriate for freezing the storage object, where each freeze method includes a measure of quiesce strength.

Neither Cabrera, Cochran(1), Cochran(2), nor PCW, singly or in combination, teach an application programming interface that returns or transmits a freeze list with one or more freeze methods, where each freeze method includes a measure of quiesce strength. Accordingly, Appellants submit that Claims 7 and 9 along with their dependent Claims 8 and 10 patentably distinguish over the art cited by the Final Office Action.

Claims 11 – 12:

Claim 11 recites an application programming interface comprising, in pertinent part, a freeze list data structure storing data representing one or more freeze methods appropriate for freezing the storage object, and a freeze method identifier identifying a selected freeze method from the one or more freeze methods, wherein each freeze method includes a measure of quiesce strength. Appellants can find no teaching or suggestion in either Cabrera, Cochran(1), Cochran(2), or PCW, taken singly or in combination, of an application programming interface including a freeze list data structure as well as a freeze method identifier as recited in Claim 11. Accordingly,

Claim 11 and its dependent Claim 12 are believed to patentably distinguish over the art cited by the Final Office Action.

Claims 13 and 15:

Claim 13 recites an application programming interface comprising, in pertinent part, a quiesce data structure storing data representing one or more quiesce methods appropriate for quiescing a storage object, wherein each quiesce method includes a measure of quiesce strength. Neither Cabrera, Cochran(1), Cochran(2), nor PCW, taken singly or in combination, teach or suggest an application programming interface comprising such a quiesce data structure. Appellants therefore submit that Claim 13 and its dependent Claim 15 also patentably distinguish over the art cited by the Final Office Action.

Claims 18 and 20:

Claim 18 recites a method comprising, in pertinent part, receiving a quiesce list with one or more quiesce methods for quiescing a storage object from an application programming interface, wherein each quiesce method includes a measure of quiesce strength. Appellant can find no teaching or suggestion in Cabrera, Cochran(1), Cochran(2), or PCW, taken singly or in combination, of receiving a quiesce list including measures of quiesce strength for one or more quiesce methods. Accordingly, Claim 18 and its dependent Claim 20 are also believed to patentably distinguish over the art cited by the Final Office Action.

Second Ground of Rejection:

Claims 14, 16, and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cabrera in view of Cochran(1), Cochran(2), and PCW, and in further view of Gregg (USPN 5,938,786). Appellants traverse this rejection for the following reasons.

Claim 14: •

Claim 14 is dependent upon Claim 13, which recites an application programming interface, that comprises, in pertinent part, a quiesce data structure storing data representing one or more quiesce methods appropriate for quiescing a storage object, wherein each quiesce method includes a measure of quiesce strength. Gregg is silent with respect to quiesce strength. Neither Gregg, Cabrera, Cochran(1), Cochran (2), nor PCW, taken singly or in combination, teach or suggest an application programming interface comprising a quiesce data structure representing one or more quiesce methods with included measures of quiesce strength. Accordingly, Claim 14 is believed to patentably distinguish over the art cited by the Final Office Action.

Claims 16 and 17:

Claim 16 recites a method comprising, in pertinent part, means for transmitting a quiesce list having one or more quiesce methods appropriate for quiescing a storage object, wherein each quiesce method includes a measure of quiesce strength. Gregg is silent with respect to quiesce strength. Neither Gregg, Cabrera, Cochran(1), Cochran (2), nor PCW, taken singly or in combination, teach or suggest transmitting a quiesce list with one or more quiesce methods, where each method includes a measure of quiesce strength. Accordingly, Claim 16 and its dependent Claim 17 is also believed to patentably distinguish over the art cited by the Final Office Action.

VIII. CONCLUSION

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 1, 3 – 18 and 20 was erroneous, and reversal of the decision is respectfully requested.

The Commissioner is authorized to charge the appeal brief fee of \$500.00 and any other fees that may be due to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 50-1505/5760-17800/BNK. This Appeal Brief is submitted with a return receipt postcard.

Respectfully submitted,



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IX. CLAIMS APPENDIX

The claims on appeal are as follows.

1. A method comprising:
transmitting data to an application programming interface identifying a storage object;
and
receiving, from the application programming interface, a freeze list with one or more
freeze methods appropriate for freezing the storage object, wherein each freeze
method includes a measure of quiesce strength.

3. A computer-readable medium having program code which, when executed on a
computer, implements the method of claim 1.

4. A method comprising:
transmitting data to an application programming interface identifying a storage object;
receiving a freeze list with one or more freeze methods appropriate for quiescing the
storage object from the application programming interface, wherein each freeze
method includes a measure of quiesce strength;
selecting one of the freeze methods; and
issuing a command to the application programming interface to execute the freeze
method.

5. The method of claim 4, wherein selecting is a function of quiesce strength.

6. A computer-readable medium having program code which, when executed on a
computer, implements the method of claim 4.

7. An application program interface that operates with an application to generate frozen images of a storage object, the interface comprising:
 - means for receiving data identifying a storage object;
 - means for returning a freeze list with one or more freeze methods appropriate for freezing the storage object, wherein each freeze method includes a measure of quiesce strength;
 - means for receiving a selected freeze method associated with the storage object; and
 - means for returning a frozen image as a function of the selected freeze method.
8. The application program interface of claim 7, wherein the means for receiving data identifying a storage object includes a call which identifies the storage object and provides a list of preferences.
9. An application program interface that operates with an application to generate frozen images of a storage object, the interface comprising:
 - means for receiving data identifying a storage object; and
 - means for returning a frozen image of the storage object, wherein the means for returning a frozen image includes means for
 - transmitting a freeze list having one or more freeze methods appropriate for freezing the storage object, wherein each freeze method includes a measure of quiesce strength, and
 - transmitting a frozen image representative of the storage object.
10. The application program interface of claim 9, wherein the means for receiving data identifying a storage object includes a call which identifies the storage object and provides a list of preferences.
11. An application program interface for controlling formation of a frozen image of a storage object, the interface comprising:

a storage object identifier, wherein the storage object identifier identifies the storage object;

a freeze list data structure, wherein the freeze list data structure stores data representing one or more freeze methods appropriate for freezing the storage object;

a freeze method identifier, wherein the freeze method identifier identifies a selected freeze method from the one or more freeze methods, wherein each freeze method includes a measure of quiesce strength; and

a data structure for returning a frozen image corresponding to the selected freeze method.

12. The application program interface of claim 11, wherein the storage object identifier is transferred within a call to the application program interface.
13. An application program interface for controlling quiescing of a storage object, the interface comprising:
 - a storage object identifier, wherein the storage object identifier identifies the storage object;
 - a quiesce data structure, wherein the quiesce data structure stores data representing one or more quiesce methods appropriate for quiescing the storage object, wherein each quiesce method includes a measure of quiesce strength; and
 - a quiesce method identifier, wherein the quiesce method identifier identifies a selected quiesce method from the one or more quiesce methods.
14. The application program interface of claim 13, wherein the application program interface transmits a signal on completion of storage object quiesce.
15. The application program interface of claim 13, wherein the storage object identifier is transferred within a call to the application program interface.

16. An application program interface for controlling quiescing of a storage object, the interface comprising:

means for receiving data identifying a storage object;
means for transmitting a quiesce list having one or more quiesce methods appropriate for quiescing the storage object, wherein each quiesce method includes a measure of quiesce strength; and
means for returning an indication that the storage object is quiesced.

17. The application program interface of claim 16, wherein the means for receiving data identifying a storage object includes a call which identifies the storage object and provides a list of preferences.

18. A method comprising:

transmitting data to an application programming interface identifying a storage object;
and
receiving a quiesce list with one or more quiesce methods appropriate for quiescing the storage object from the application programming interface, wherein each quiesce method includes a measure of quiesce strength.

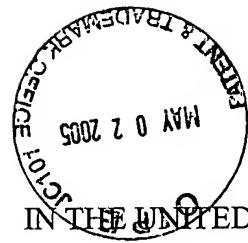
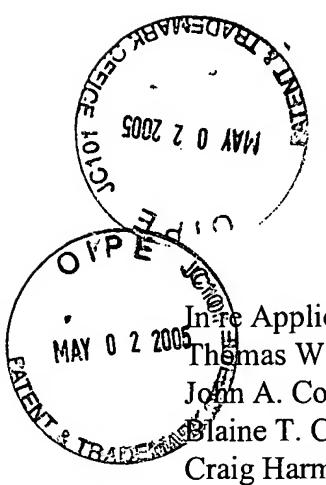
20. A computer-readable medium having program code which, when executed on a computer, implements the method of claim 18.

X. EVIDENCE APPENDIX

No evidence submitted under 37 CFR §§ 1.130, 1.131 or 1.132 or otherwise entered by the Examiner is relied upon in this appeal.

XI. RELATED PROCEEDINGS APPENDIX

There are no related proceedings known to Appellants, Appellants' legal representatives, or assignee which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Thomas W. Lanzatella, Graham Bromley,
John A. Colgrove, Ron Karr,
Blaine T. Cuykendall, Oleg Kislev,
Craig Harmer

Serial No.: 10/087,901

Filed: February 28, 2002

For: System and Method for
Controlling the Creation of
Stable Disk Images

Group Art Unit: 2188

Examiner: Ross, John M

Attorney Docket.: 5760-17800

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Box Non-Fee Amendment, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below:

B. Noël Kivlin
Registered Representative

Date

Signature

FEE AUTHORIZATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

The Commissioner is hereby authorized to charge the following fee to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account Number 50-1505/5760-17800:

Fee: Appeal Brief
Amount: \$500.00
Attorney Docket No.: 5760-17800

The Commissioner is also authorized to charge any extension fee or other fees which may be necessary to the same account number.

Respectfully submitted,

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